



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,824	12/13/2001	Bruno Colin	BONN-069	6184

7590 07/16/2004

James C Lydon
100 Daingerfield Road Suite 100
Alexandria, VA 22314

EXAMINER

NAGPAUL, JYOTI

ART UNIT	PAPER NUMBER
----------	--------------

1743

DATE MAILED: 07/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

cd

Office Action Summary	Application No.		Applicant(s)	
	10/009,824		COLIN ET AL.	
	Examiner		Art Unit	
	Jyoti Nagpaul		1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 19-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/13/01</u> . | 6) <input type="checkbox"/> Other: ____ |

Claim Interpretation

With respect to Claim 19, the applicant recites "for example a plane face" in line 8.

With respect to Claim 24, the applicant recites "such as an elastomer pin" and "such as a wedge" in lines 2 and 3, respectively.

With respect to Claim 26, the applicant recites "preferably a plurality of, valves of claim 19" and "preferably connected together in order to form a strip assembly" in lines 2 and 6, respectively.

With respect to Claim 28, the applicant recites, "preferably with spacing having values used in the field of electronics, such as 3.96mm, 2.54mm or 1.28mm" in line 3.

With respect to Claim 29, the applicant recites "such as electromagnets" in line 8.

Thus, in claims 19, 24, 26, 28, and 29, the phrases "for example", "such as", "preferably" are limitations and such language are not given any patentable weight because they are not considered limiting, only exemplary. If applicant wishes the limitations to be limiting, applicant must re-write the claim without the exemplary language.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19, 20, 22 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 19, the phrase "it" in Line 4 renders the claim indefinite and vague. The phrase should be replaced by the phrase - - the valve- -.

Regarding claim 20, the word "the" in Line 2 renders the claim indefinite and vague. The word should be replaced by - - a - -.

Regarding claim 22, the phrase "the faces concerned" in Line 3 renders the claim indefinite and vague. The phrase should be replaced by - - one of the two faces - -.

In regards to Claim 29, the claim is indefinite and vague which refers to claim 26. The intended use of the word "implemented" is unclear. It is unclear if applicant is claiming an implementation method whereas claim 26 is directed to a device: which is indefinite as to what is encompassed thereby or what is intended.

Regarding claim 32, the word "is" in Lines 1 and 3 renders the claim to be indefinite and vague. The word should be replaced by - - are - -.

Claim 33 recites the limitation "the maneuvering pins" in Claim 33 Line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

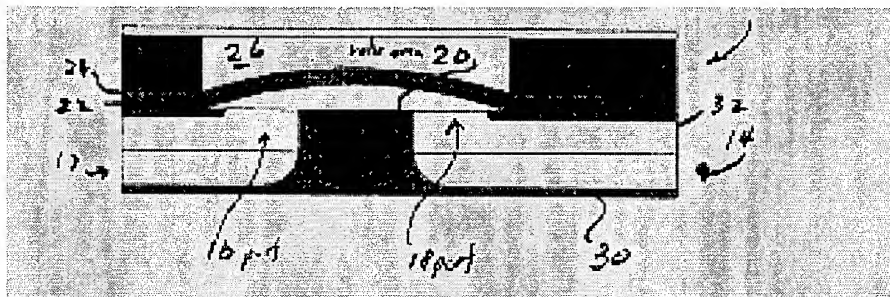
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19-23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moles in view of Maurer.

Moles teaches a valve (10), crossed by at least one channel (12), allowing to direct at least one fluid displaced by transfer means within a test sample card, the card featuring two faces connected to one another by an edge. The valve comprises a flexible film, and/or which can be distorted, part of which is fixed to at least one of the faces of card which may be activated or deactivated. The securing of the film is made on at least one of the faces. The securing of the film (22) on the card is peripheral to a set of channels crossed by valve, namely at least one fluid entry channel and at least on fluid exit channel. The securing of the film is sealed peripheral to the valve. The film on the valve is in contact with the plane face of the card, when the valve is in closed position, and is lifted in relation to plane face, when the valve is in open position. (Refer to Figure 1. below and Figure 2)

Figure 1. Valve



Moles fails to teach the compression means acts on the film at the intersection point between at least one of the channels of the valve and the face concerned of the card. Moles also fails to teach the compression means features a closing means, such as an elastomer pin, and an opening and closing means, such as a wedge, which synergizes with actuation mechanisms.

Art Unit: 1743

Maurer teaches a valve arrangement for film compression means. The valve arrangement includes a slider element, in which the one contact surface of the slider element closes a throughflow opening formed by a valve seat and an open position in which a throughflow passage formed in the slider element frees the throughflow opening. (Column 2, Lines 60-65) The slider element (6) acts as a means for compression. The compression means (6) can act on the film (2) at the intersection point between at least one of the channels of the valve and one of the faces of the card. The valve arrangement/compression means comprises a flexible tab and features closing and opening means.

It would have been obvious to one of the ordinary skill in this art at the time of the invention by applicant to modify the system of Moles to include the features of Maurer to provide the slider element for mechanical support to ensure closure of the valve by compression means.

With respect to claim 26-28, Moles fails to describe a sample card comprising least two, and preferably a plurality of valves, which are positioned side by side along an edge of said card, fully or partly distributed along at least one edge of said card, and provided with compression means dedicated to the compression of the valves, positioned side, which are preferably connected together order to form a strip assembly. Wherein two adjacent valves positioned side by side is separated by a space between 1 and 5 mm. Moles does not disclose a plurality of valves.

However, it would have been obvious to one of the ordinary skill in this art at the time of the invention by applicant to provide multiple valves arranged in an array

Art Unit: 1743

formation. The case law states that mere duplication of parts has no patentable significance. See, *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). As to the arrangement being an array, it would have been obvious to provide an ordered arrangement of valves in order to provide them for use with other conventional laboratory apparatus, such as microtitre trays and microfluidic devices.

Allowable Subject Matter

3. Claims 29, 32, and 33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

With respect to Claim 29, the prior art does not teach, nor fairly suggest a storage area, a valve opening and closing inspection area, and an intermediate area.

With respect to Claim 32, the prior art does not teach, nor fairly suggest a set of actuators mobile along an axis parallel to the plane.

With respect to Claim 33, the prior art does not teach, nor fairly suggest maneuvering pins.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Nagpaul whose telephone number is 571-272-1273. The examiner can normally be reached on Monday thru Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1743

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JN


Jill Warden
Supervisory Patent Examiner
Technology Center 1700